NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB [illegible] AM 10:32

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial x Annual Special Date of Test Feb. 8, 1957

Company Amerada Pet. Corp. Lease Amerada-Shell St."EU" Gas Unit Well No. 1

Unit G Sec. 8 Twp. 19-S Rge. 37-E Purchaser El Paso Natural Gas

Casing 5-1/2" Wt. 15.5# I.D. 4.950 Set at 3853' Perf. 3697' To 3845'

Tubing 2-3/8" Wt. I.D. 1.995 Set at 3769' Perf. 3765' To 3769'

Gas Pay: From 3697' To 3845' L 3697' xG .675# Est. -GL 2495 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 1-31-57 Packer 3510' Reservoir Temp. 90°F

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1036				72
1.		16/64"	966		71°	966				3
2.		18/64"	950		71°	950				3
3.		24/64"	854		71°	854				3
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1.3309		979.2	0.9896	0.9427	1.108	1,347
2.	1.6907		963.2	0.9896	0.9427	1.108	1,683
3.	3.0300		867.2	0.9896	0.9427	1.095	2,684
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas

Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid

P_c 9.936 $(1-e^{-s})$ 0.158 P_c 1049.2 P_c^2 1100.8

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	979.2	958.8	13.38	179.02	28.3	987.1	113.7	994	.95
2.	963.2	927.8	16.72	279.55	44.2	972.0	128.8	986	.94
3.	867.2	752.0	26.67	711.29	112.4	864.4	236.4	930	.89
4.									
5.									

Absolute Potential: 10,800 MCFPD; n .89

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer D - Monument, New Mexico

AGENT and TITLE W.G. Abbott - District Engineer W.G. Abbott

WITNESSED

COMPANY

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.